

*Lotus rubriflorus* has been found only at the type locality, but within the one known colony the plants are abundant. Collections made two years apart suggest that the species is not merely transient at this locality. It inhabits sparse grassland in an open stand of *Quercus Douglasii*, growing in association with the common vernal annuals of the region, such as *Lotus subpinnatus*, *L. humistratus*, *Orthocarpus attenuatus*, *Microseris linearifolia*, *M. sylvatica*, *Pentachaeta exilis*, *Plagiobothrys canescens*.

On the basis of the pinnate, short, exstipulate leaves, the small, solitary flowers, and the straight, beakless, dehiscent legumes, *Lotus rubriflorus* belongs to the subgenus *Acmispon* (Raf.) Ottley (Univ. Calif. Publ. Bot. 10: 197. 1923). Within this subgenus, *L. rubriflorus* is most closely associated with *L. denticulatus* Greene, *L. subpinnatus* Lag., and *L. humistratus* Greene, these species all having dilated leaf rachises, few, inequilateral leaflets, sessile flowers, and flattened, angled seeds.

Although growing in association with *Lotus humistratus* and *L. subpinnatus*, *L. rubriflorus* is a very distinct, easily recognized species. It most closely resembles *L. humistratus* in pubescence, length of calyx lobes, and shape and size of legumes, but is more pilose, and the calyx lobes are longer. It differs strikingly from *L. humistratus*, as well as from *L. denticulatus* and *L. subpinnatus*, in the lanceolate leaflets. Furthermore, the flower color of *Lotus rubriflorus* is exceptional; in North American representatives of the genus the corolla is characteristically whitish or yellow, although often veined, streaked or suffused with red, pink, or purple, or may fade red. In *L. rubriflorus* the corolla is a uniform red. The following key brings out these distinguishing features and separates *L. rubriflorus* from those species to which it is most nearly related:

Leaflets obovate, often obtuse; flowers cream color to yellow, tinged with or fading red or purple .....	<i>L. denticulatus</i> <i>L. humistratus</i> <i>L. subpinnatus</i>
Leaflets lanceolate, acute; flowers bright pinkish red, fading bluish .....	<i>L. rubriflorus</i>

State College of Washington,  
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## REVIEWS

*A Monograph of the Genus Calochortus.* By MARION OWNBEY. Annals of the Missouri Botanical Garden. Volume XXVII. Pp. 371-560. St. Louis, December 10, 1940.

The genus *Calochortus*, ranging from Nebraska to the Pacific and from Guatemala to British Columbia, is treated by Dr. Ownbey in three sections, *Eucalochortus*, *Mariposa* and *Cyclobothra*.

The sections are divided into twelve subsections under which are arranged the fifty-seven species and thirteen varieties.

Dr. Ownbey's approach to the problems in *Calochortus* from the viewpoint of herbarium study, extensive field work, garden cultures and cytological investigation gives his work a definitiveness possessed by too few monographs. While some botanists may feel that he has admitted to specific rank several entities that might better have received subspecific status, on the whole his decisions seem to be based on a firm foundation of evidence both from comparative morphology and from geographic distribution.

The publication of seven new species and ten new varieties should arouse keen interest in the further study of local areas. Of great significance in this connection is the speciation that has taken place in the Siskiyou Mountains of southern Oregon and northern California where four local, very distinct, rarely collected species are found. This area should continue to be a fertile collecting ground.

Because of the cytogenetic approach and the fact that Dr. Ownbey is now working in the west where garden cultures and field studies may be carried on we await with great interest any additional developments in the phylogenetic analysis of this genus.—JOHN L. MORRISON, Department of Botany, University of California, Berkeley.

*The Flora of Whatcom County, State of Washington.* By W. C. MUENSCHER. Pp. 1-134, with 10 figures and 1 table. William A. Church Company, Ithaca, New York, 1941. Published by the author.

A county flora is so rarely prepared for a portion of any of the western states that the appearance of a less excellent volume than the present one evokes especial comment.

The twenty-three hundred square miles comprising Whatcom County occupy the northernmost county of the Pacific Coast and extend in altitude from near sea-level on Puget Sound to 10,750 feet at the summit of Mount Baker, one of the principal peaks of the Cascade Range. With the coastal hills in the Transition life zone, and timberline on Mount Baker at only 6000 feet, all of the boreal zones are thus represented in a relatively small altitudinal range as well as in a small area. With these facts in mind, one will be less astonished at the inclusion of 1042 species and varieties. The author contributed an earlier catalogue of the same area to "Muhlenbergia" in 1914, and has noted additions to this original list, chiefly in "Torreya" and MADROÑO, during the subsequent years. A substantial portion of the list is owing to the writer's predilection for aquatic and introduced plants, both of which are too likely to be overlooked by collectors. Although the plant records of the present book are based primarily upon Dr. Muenscher's own collections, the first set of which is preserved